

# Chart of bases and method of mounting Lyman Junior Targetspot and Super Targetspot Scope Sights

No definite locations of bases on Rifles for telescopic sights can be given because of the different dimensions of guns, stocks or normal holding position of individuals. Experience makes it desirable to suggest that the base for the front mount be located first, except where the barrel or receiver of the gun is already tapped and drilled for scope bases. Before actually attaching either base, hold the scope on the gun nearly in the desired shooting position as the user will require it. The rear end of the scope should be about 1½" from the eye in every shooting position to give maximum field. This distance from the eye to the scope is called "Eye Relief."

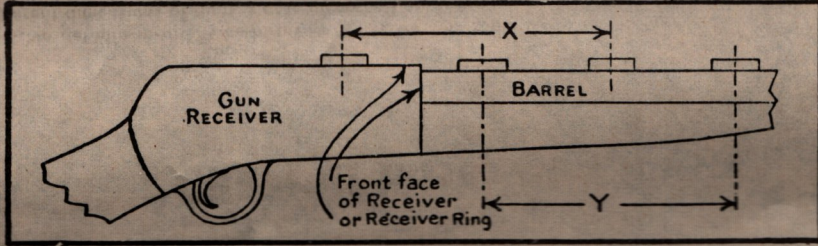
The normal position of the scope having thus been tentatively determined, the front mount should be located so that the Eye Relief will be possible in either offhand, prone, sitting or kneeling positions. This will determine the location of the front base to which the front mount is attached.

## LOCATING FRONT SCOPE BASE

Before actually attaching the front base in the position thus determined, make certain that the rear base which will hold the rear mount can feasibly be attached to the receiver, receiver ring, or the barrel at a distance of about 6" or preferably 7.2" measuring from center to center of bases because the accompanying tables show adjustments of the rear mount for these two distances.

It will be found on some guns that the natural location of the rear base brings the distance between bases as short as 5". The widest distance between bases not exceeding 7.2" is desirable, the Eye Relief being the controlling factor in the consideration of scope base locations.

## DIAGRAM SHOWING TWO METHODS OF LOCATION OF BASES



## MAKING FRONT BASE SCREW HOLES

Thus the location of the bases having been established, it only remains to make the screw holes for the bases so that when the bases are attached they will be in a horizontal plane with each other. As previously mentioned, the front base is usually attached first—its location has been established as described above. The screw holes in the base may be used as a templet for spacing the holes correctly. Use a small clamp to hold the base on the barrel. A couple of small mechanics squares, one in the slot in the barrel that holds the factory rear sight and the other on the top surface of the base, will show whether the surface of the base is in proper horizontal position. When the base is correct, tighten the clamp. The base screw holes can now be made for the front base. It is recommended that all operations to this point be checked or verified to avoid possibility of error in location of holes.

## LEVELING REAR BASE

After front base is attached, the rear base may be clamped in its position and the top surface made parallel to the top surface of the front base by means of the two mechanics squares.

In actual use in the various shooting positions the Relief Adjusting Stop which is the collar around the tube in front of the front mount may be located to give the correct Eye Relief. The scope may move forward with the recoil of the gun so after each shot it should be returned to its proper position with the Relief Adjusting Stop against the front mount.

Mechanically when the bases are clamped in proper position, use a body size drill No. 26 to spot the barrel for the hole that should be drilled with No. 31 drill to a depth of slightly more than ¼", depending on the thickness of the gun barrel. Never drill close enough so that there will be any danger of the drill cutting into the bore. Gunsmiths usually follow this with a No. 31 drill flattened so that the full depth of the screw hole can be obtained. This drilling is done with the base clamped in position. Likewise, tap out the holes using the plug tap first, then the bottoming tap clear to the bottom of the hole. Guard against breaking this tap off in the hole. A little lard or lard oil will help in tapping.

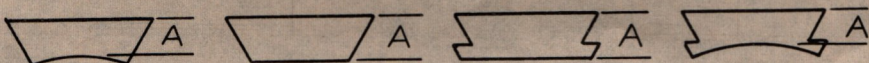
Put in one screw turning carefully until it hits the bottom of the tapped hole in the barrel. This will show how much the screw should be shortened by grinding off the lower end. Treat the other screw in the same manner. When in final position, the screw should be very tight. A screw driver fitting the slots in the screw hole is desirable for best results.

For the convenience of gunsmiths or those who may wish to use front or rear bases higher or lower than usual, the following dimensions are given with measurement taken from point on under side of the base directly above the center of the bore, to the top of the base. As mounting screw holes of front bases are all the same distance apart, front bases are interchangeable with each other. Similarly rear bases will interchange with each other.

## HEIGHT OF SCOPE BASES

Symbol	Dimens "A"		Top	Remarks
A	.167	Front	Flat	Regular
AA	.167	Front	Groove	Regular
AB	.167	Front	Flat	Savage M19 One Hole
AC	.167	Front	Flat	Reg. Flat Bottom
AK	.185	Front	Groove	Drive in rear sight slot
AK	.185	Front	Flat	For use with No. 77 Front Sight
B	.225	Front	Flat	Regular
BA	.225	Front	Groove	Regular
BK	.260	Front	Groove	Drive in Rear Sight Slot
BK	.260	Front	Flat	For use with No. 77 Front Sight
BT*	.190	Front	Groove	Spec. Taper Sav. 99
C	.315	Front	Flat	Regular
D	.415	Front	Flat	Regular
E	.475	Front	Flat	Regular
F	.475	Front	Groove	Regular
G	.315	Front	Groove	Regular
H	.415	Front	Groove	Regular
J	.315	Rear	Flat	Special Clamp Screw Cut Forward of center
K	.300	Front	Groove	Drive in Rear Sight Slot
K	.300	Front	Flat	For use with No. 77 Front Sight
KK	.370	Front	Groove	Drive in Rear Sight Slot
KK	.370	Front	Flat	For use with No. 77 Front Sight
L	.167	Rear	Flat	Regular
LF	.167	Rear	Flat	Regular Flat Bottom
LL	.167	Rear	Flat	Spec. Sav 19 Mounts in factory holes
M	.295	Rear	Flat	Reg. Flat Bottom
O	.225	Rear	Flat	Spec. Wide Base for Receiver
P	.209	Rear	Flat	Regular
R*	.213	Rear	Flat	Spec. Taper Sav. 99
S	.205	Rear	Flat	Reg.—Flat Bottom
T*	.190	Front	Flat	Spec. Taper Sav. 99
U	.167	Rear	Groove	Regular
V*	.180	Rear	Flat	Spec. Taper Sav. 99 on Receiver
W*	.255	Rear	Flat	Spec. Taper Sav. 99 over hammer Ind.
Y*	.294	Rear	Groove	Spec. Taper Sav. 99 over hammer indicator

\* Dimensions given at center.



The following table indicates the height of bases for Lyman Target Telescope sights. Bases furnished with Lyman Scopes are all marked with letter symbols in accordance with this list. The letter "A" on the diagram above indicates how base measurements are taken. Heights of front bases required may vary according to the scope and ammunition.

Model	Distance Y on Diagram	Base Front	Rear Base	When rear base is mounted on receiver X on diagram	Remarks
Win. 73, 76, 86, 55, 87, 92, 94, 95, 53, 55, 64, 65, 71, 43	6"	A	L		Rear base flush against receiver ring. Holes provided in Win. 75.
Win. 74		A	L	7 3/8"	Win. 71, 86, 92, 94, 95, 55, will require offset adapters except Win. 92, .25/20, .32-20.
Win. 64 30/30	6"	B	L		Factory rear sight will have to be removed except on models 87, 86, 95, 06, 53, 55.
Win. 90, 06, 61, 62	7 3/8"	A	L		
Win. 95 Carbine	7 3/8"	H	L		
Win. 03, 63	7 3/8"	B	L		Factory rear sight will have to be removed except models 03.
Win. 05, 07, 10		A	L	6 1/2"	Front of rear base 3 3/8" back of front of receiver.
Win. 56, 57, 59, 60, 67, 68	7 3/8"	A	L		Rear base flush against receiver ring.
69, 72	7 3/8"	B	L		Factory rear sight will have to be removed except models 56, 57.
Win. 52 Standard	7 3/8"	B	L		Rear base flush against receiver ring.
Win. 52 Hvy. Barrel		B	L		Gun has mounting screw holes for bases.
Win. 52 Bull Gun		B	L		
Win. 75 Target		B	L		
Win. 54 Standard		H	U	7 3/8"	Rear base on receiver ring.
Win. 54, .22 Hornet		K	U	6"	Front base in place Fact. Rear
Win. 54 .220 Swift		B	U	7 3/8"	New Screw holes for Front Base
Win. 54 Sniper		B	U	7 3/8"	New Screw holes for Front Base
Win. 70 Old Style		KK	J		Rear base on receiver bridge.
Win. 70 Old Style		F	U	6"	Front base in place Fact. Rear.
Win. 70 Standard		KK	U	7 3/8"	New Holes for Front Base.
Win. 70 Standard		F	U		Rear base on receiver bridge
Win. 70 New Style	9 3/4"	BK	P		New Holes for Front Base.
Win. 70 Target		G	U		New Holes for Front Base.
Win. 70 Bull		B	U		New Holes for Front Base.
Win. 70 Nat'l Mat.		H	U		New Holes for Front Base.
Win. 75 Sporting, 74	7 3/8"	G	L		Rear Base against receiver ring.
Rem. 8, 81		A	L	5"	Rear Base against receiver ring. Offset adapters required.
Rem. 12 and 121		B	L	7 3/8"	Rear base flush against receiver.
Rem. 14 and 141	6"	B	L		Rear base flush against receiver.
Rem. 24 and 241	6 1/4"	B	L		Rear base flush against receiver.
Rem. 25		B	L	7 3/8"	Front of rear base 1 3/4" back of front end of receiver.
Rem. 30-.25 and .257		E	S	6"	On receiver ring.
Rem. 720, .257 and .270		E	S		On receiver ring.
Rem. 721		KK	U		Front base in place of factory rear.
Rem. 721		F	U		Rear on receiver ring.
Rem. 30-.30 cal.		D	S	6"	On receiver ring.
Rem. 720, .30-06 Gov't		D	S	6"	On receiver ring.
Rem. 34, 341	7"	A	L		Rear base on receiver bridge or flush against receiver ring.
Rem. 510-511	7 3/8"	B	L		Rear base on barrel.
Rem. 37, 521	7 3/8"	B	L		Mounting screw holes already in gun.
Rem. 513, 414					
Sav. 99		T	Y	7 3/8"	Rear base mounted over Hammer Indicator.
Sav. 99 New Models		AA	Y	7 3/8"	
Sav. 03, 14, 25, 29	6"	A	L		Rear Base against receiver ring.
Sav. 3, 4, 5, 6		B	L	7 3/8"	Rear base on receiver bridge.
Sav. 19, 22, 23 A.B.C.		A	LL	7 3/8"	On older models of 19, 22, 23 A, B and C rear of rear base 2 5/8" from rear of receiver.
Sav. 19-33 N.R.A.		AB	LL	5 1/2"	On newer models rear base is mounted on receiver where holes are already drilled and tapped. Front base in place Fact. Rear.
Sav. 23 D		B	LL	7 1/2"	
		AK	LL		
Sav. 40, 45		G	U	7 3/8"	Rear of rear base 2 5/8" from rear of receiver.
Savage Utility	7 3/8"	C	L		Both bases on barrel.
Stevens Rifles		B	L	7 3/8"	
Stevens Buckhorn Models		C	L	7 3/8"	Rear base mounted on bridge.
Marlin 92, 93, 94, 95	6 1/2"	A	L		Rear base flush against receiver ring.
Marlin 39, 39A	7 3/8"	B	L		
Marlin 36, 336		LF	BK	7 3/8"	Rear base flush against receiver ring.
Marlin 47	6"	A	L		
Marlin 50, A-1		B	U	7 3/8"	
Marlin 80	6"	B	L		
Ballard	7 3/8"	A	L		
Mann-Schoenauer		H	U	6"	Rear base on receiver ring.
Krag	6"	C	L		Rear base flush to receiver. Must be used without barrel cover.
Mauser .22 cal.	6"	A	L		Rear base flush to receiver.
Mauser Sporting rifle 7 m/m.		E	O	6 3/4"	Mounted on receiver ring.
Mauser Carbine 7 m/m.	5 1/2"	C	L		Rear base flush against receiver.
Springfield 03		E	O	6"	Rear base on receiver ring.
Springfield M1—.22 cal. and Sporter .30 cal.		E	O	6"	Rear base on receiver ring. If mounting rear base front of receiver, use "D" & M. 6" centers.
Springfield M2					
Russ. 7.62 m/m.		H	L	7 3/8"	Front of rear base 9/16" back from front end of receiver ring.
B. S. A. Mod. 12 Match .22 cal.		A	L	7 3/8"	Rear base on receiver.
Lee-Enfield Mil.	5 1/2"	D	M		Rear base mounted just ahead of receiver. Front base use screw hole in rear sight.
Lee-Enfield Spt.	5 1/2"	D	M		Rear base against receiver ring.
Mossberg Rifles		B	L	7 3/8"	
Enfield 1917		E	O	6"	Rear base on receiver ring.
Sedgeley-Springfield Roberts 257		E	O	6"	Rear base on receiver ring.
		X	S	6"	

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